NEWS

Scientists research fury of Maritime Continent's weather

Author: Press Office
11:17 (UTC+1) on Fri 29 Jun 2018

One of the world's greatest meteorological challenges is gaining a better scientific understanding of the so-called Maritime Continent – the region between the Indian and Pacific Oceans in south-east Asia.

The Met Office, together with regional partners from Indonesia, Malaysia and the Philippines, are leading a programme under the Newton Fund's Weather and Climate Science for Service Partnership (WCSSP) Programme. Scientists from the partner institutes are joining forces with the UK's research community to pool expertise and address this challenge together.

The region – which has been described as a heat-engine within the tropics – is regularly impacted by severe weather. The worst event in recent times is Typhoon Haiyan which struck the central Philippines in November 2013 causing significant loss of life and destruction. Typhoon Haiyan is likely to be the strongest tropical cyclone (in terms of wind speed) to make landfall on record. Some parts of the region, such as Malaysia and Indonesia, are particularly prone to heavy rainfall and flooding associated with monsoon patterns.

Professor Simon Vosper, Met Office Director of Meteorological Science is the UK project lead. Professor Vosper said: "The programme has several key aims, but perhaps the most important is understanding the impact of large-scale atmospheric processes on the high-impact weather of the region. As we've seen from Typhoon Haiyan, the region experiences some of the world's worst weather. It is exciting and humbling to think that any progress in this project will make a difference to people's lives, with the potential of saving lives."

The multi-year WCSSP South East Asia project began last year and already it has delivered some major benefits including advances in forecasting tropical cyclones in the region and providing training to forecasters to increase their capability to forecast and communicate the threats from high-impact weather.

The first workstream focuses on improving the understanding of how large-scale atmospheric processes affect the weather and climate of SE Asia. Successfully representating large-scale weather patterns in the numerical weather prediction models use by forecasters can significantly improve local weather forecasts. Professor Vosper added: "Large-scale weather patterns in the region can also have a global impact, so improving our understanding and representation of these patterns in weather-prediction models will have benefits beyond the region."

The second workstream focuses more on the regional-scale modelling systems that can capture finer-detail weather features and can represent certain atmospheric processes more accurately. The third brings together the scientific and modelling advances in the other workstreams to develop weather forecasting tools to improve the advice and forecasts needed to mitigate against high-impact weather.

Current partners include the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), the National Disaster Management Agency (NADMA) (Malaysia), the Meteorological, Climatological and Geophysical Agency (BMKG) (Indonesia), the Met Office, the University of Leeds (UK) and the University of Reading (UK).

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